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JAN 16 2007

**Amendment and Response**

Serial No.: 10/643,748

Confirmation No.: 4133

Filed: 19 August 2003

For: DENTAL ARTICLE FORMS AND METHODS

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**Remarks**

The Office Action mailed 5 December 2006 has been received and reviewed. Claims 1-9 and 11-38 having been canceled, without prejudice, and claims 45-64 having been added, the pending claims are claims 39 and 42-64. Reconsideration and withdrawal of the rejections are respectfully requested.

New claims 45-64 are supported, for example, by the originally filed claims and at page 12, lines 19-29 of the specification.

**The 35 U.S.C. §103(a) Rejections**

The Examiner rejected claims 1-9, 11-12, 16, 24, 26, 28-35, and 37 under 35 U.S.C. §103(a) as being unpatentable over Kennedy (U.S. Patent No. 4,129,946) in view of Neustadter (U.S. Patent No. 3,565,387) and Ivanov et al. (U.S. Patent No. 4,113,499). Claims 1-9, 11-12, 16, 24, 26, 28-35, and 37 having been canceled, the rejection has been rendered moot. Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

The Examiner also rejected claims 13-14, 25, and 36 under 35 U.S.C. §103(a) as being unpatentable over Kennedy (U.S. Patent No. 4,129,946) in view of Neustadter (U.S. Patent No. 3,565,387) and Ivanov et al. (U.S. Patent No. 4,113,499) as applied to claims 1, 16, and 28 above, and further in view of Uthoff (U.S. Patent No. 5,102,332). Claims 13-14, 25, and 36 having been canceled, the rejection has been rendered moot. Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

The Examiner rejected claims 15, 27, and 38 under 35 U.S.C. §103(a) as being unpatentable over Kennedy (U.S. Patent No. 4,129,946) in view of Neustadter (U.S. Patent No. 3,565,387) and Ivanov et al. (U.S. Patent No. 4,113,499) as applied to claims 1, 16, and 28 above, and further in view of Kahn (U.S. Patent No. 3,949,476). Claims 15, 27, and 38 having

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been canceled, the rejection has been rendered moot. Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

The Examiner rejected claims 39 and 42-44 under 35 U.S.C. §103(a) as being unpatentable over Simor (U.S. Patent No. 3,585,723) in view of Neustadter (U.S. Patent No. 3,565,387), Ivanov (U.S. Patent No. 4,113,499), and Wilson (U.S. Patent No. 5,487,663). Applicants respectfully traverse this rejection.

The Examiner alleged that "claims . . . 39 claim an article comprising a compound, and as such, does not limit the actual article to include the other structure" (e.g., page 6, Non-Final Office Action mailed 5 December 2006). Applicants disagree.

Applicants submit that claim 39 recites a method of preparing a dental article.

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations." M.P.E.P. §2143.

Applicants reiterate that, among other deficiencies, claims 39 and 42-44 are not obvious by the combination of the four documents because such documents do not teach each and every aspect of the claimed invention. For example, in the Amendment and Response of 12 September 2006 (which is incorporated herein by reference), Applicants noted that the combination of the four documents does not teach or suggest a method of making a dental article having all the recited steps, including using a dental article form having all of the recited characteristics. Further, Applicants noted that there is no motivation to combine the cited four documents. Even if there were such motivation to combine these four documents, one skilled in the art would have no reasonable expectation whatsoever that the disclosure of Simor combined with the disclosures of Neustadter et al. and Ivanov et al. and Wilson would necessarily provide the method recited in

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claim 39. While Applicants believe that the previously submitted arguments are sufficient to overcome the rejection, the following additional remarks are presented herein in an effort to further prosecution of this matter.

Although Neustadter et al. may define a malleable material, Simor does not teach a dental article form comprising an organic composition having a surfactant system mixed therein. Although Ivanov et al. disclose a surfactant mixed in a disposable mold form, Ivanov et al. is directed to molds used in the foundry industry, a completely nonanalogous technology area.

The Examiner acknowledged that this combination of three documents (Simor in view of Neustadter et al. and Ivanov et al.) does not teach or suggest each of the steps recited in Applicants' claimed method (*see, e.g.,* page 4, Non-Final Office Action mailed 5 December 2006). Thus, the Examiner cited Wilson for a disclosure of removing the dental article form from the dental article; however, Wilson does not teach that the dental article form that is self-supporting and malleable. Thus, it is respectfully submitted that there is no motivation to combine the cited four documents.

Even if there were such motivation to combine these four documents, one skilled in the art would have no reasonable expectation whatsoever that the disclosure of Simor combined with the disclosures of Neustadter et al. and Ivanov et al. and Wilson would necessarily provide the method recited in claim 39.

It is submitted that this rejection may only be made by impermissible hindsight reconstruction, that is, by picking and choosing from each document that which supports these rejections. One cannot "simply [to] engage in a hindsight reconstruction of the claimed invention, using the Applicant's structure as a template and selecting elements from references to fill the gaps." *In re Gorman*, 933 F.2d 982, 18 U.S.P.Q.2d 1885, 1888 (Fed. Cir. 1991). As the Examiner required the combination of four separate documents in the rejection, Applicants submit that this rejection could only have been made by means of impermissible hindsight reconstruction.

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As recently asserted in *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.* 411 F.3d 1332, 75 U.S.P.Q.2d 1051 (Fed. Cir. 2005), 35 U.S.C. §103 specifically requires an assessment of the claimed invention "as a whole." The "as a whole" assessment of the invention requires a showing that an artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the inventor and with no knowledge of the claimed invention, would have selected the various elements from the cited references and combined them in the claimed manner. In other words, 35 U.S.C. §103 requires some suggestion or motivation, before the invention itself, to make the new combination. See *In re Rouffet*, 149 F.3d 1350, 1355-56, 47 U.S.P.Q.2d 1453, 1457-58 (Fed. Cir. 1998).

This "as a whole" instruction in 35 U.S.C. §103 prevents evaluation of the invention part by part. Without this important requirement, an obviousness assessment might successfully break an invention into its component parts, then find a reference corresponding to each component. This line of reasoning would import hindsight into the obviousness determination by using the invention as a roadmap to find its prior art components. Further, this improper method would discount the value of combining various existing features or principles in a new way to achieve a new result - often the essence of the invention. *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275, 69 U.S.P.Q.2d 1686, 1690 (Fed. Cir. 2004). Simply identifying the various elements of a claim in the cited reference does not render a claim obvious. *Ruiz*, 357 F.3d at 1275. Instead, 35 U.S.C. §103 requires some suggestion or motivation in the prior art to make the new combination. *In re Rouffet*, 149 F.3d at 1355-56. Applicants submit that the Examiner has engaged in an improper part by part analysis of the claimed invention.

As such, Applicants respectfully submit that claims 39 and 42-44 are not obvious over the combination of Simor in view of Neustadter, Ivanov, and Wilson. Applicants respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

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**Obviousness-Type Double Patenting Rejection**

The Examiner rejected claims 1-9, 11-39, and 42-44 as provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-54, 56-73, 75, and 79-83 of copending Application No. 10/219,398 in view of Neustadter (U.S. Patent No. 3,565,387). Claims 1-9 and 11-38 have been cancelled. However, to the extent the rejection applies to claims 39 and 42-44, Applicants respectfully traverse this rejection.

"To establish a *prima facie* case of obviousness . . . the prior art reference (or references when combined) must teach or suggest all the claim limitations." M.P.E.P. §2143.

Applicants respectfully submit that the cited documents do not teach or suggest all of the language recited in the present claims. For example, the method claims of copending Application No. 10/219,398 recite, among other things, various methods of preparing a dental product, the methods comprising: providing a composition comprising a resin system, a filler system, and an initiator system; forming the self-supporting, malleable structure into a second shape; and hardening the self-supporting structure having the second shape to form a dental product (*see, e.g.,* independent claims 71 and 73). Further, the Examiner stated that the "claims of the '398 application teach using an organic composition that is self-supporting and malleable, however, do not show using a form that is capable of being filled" (*e.g.,* page 4, Non-Final Office Action mailed 5 December 2006). However, Applicants submit that the method claims of copending Application No. 10/219,398 do not recite a method wherein the "dental article form is reshaped while in the subject's mouth before or after filling the reservoir with the hardenable dental material" (*e.g.,* independent claim 39).

Further, Applicants respectfully submit that the claims of Neustadter do not disclose subject matter that would correct the deficiencies of the method claims of copending Application No. 10/219,398 noted herein above.

As such, Applicants respectfully submit that pending claims 39 and 42-44 are not obvious over the combination of claims 1-54, 56-73, 75, and 79-83 of copending Application No.

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10/219,398 in view of Neustadter. Applicants respectfully request reconsideration and withdrawal of the rejection under the doctrine of obviousness-type double patenting.

**New Claims**

New independent claim 45 recites, among other things, a method of preparing a dental article, the method comprising: selecting a dental article form having a reservoir and comprising an organic composition in the form of a self-supporting structure having a first shape and sufficient malleability to be formed into a second shape; filling the reservoir with one or more hardenable dental materials; placing the dental article form filled with one or more hardenable dental materials on a subject's tooth structure; at least partially hardening the hardenable material in the reservoir to form the dental article; optionally customizing the dental article outside of the subject's mouth; cementing the dental article to the subject's tooth structure; and removing the dental article form from the dental article; wherein the dental article form is reshaped while in the subject's mouth before or after filling the reservoir with the hardenable dental material.

New claims 46-58 provide further definition of the dental article form (claims 46-47 and 55-57), and further definition of the organic composition (claims 48-54).

New independent claim 58 recites, among other things, a method of preparing a dental article, the method comprising: selecting a dental article form having a reservoir and comprising an organic composition in the form of a self-supporting structure having a first shape and sufficient malleability to be formed into a second shape; filling the reservoir with one or more hardenable dental materials; placing the dental article form filled with one or more hardenable dental materials on a subject's tooth structure; hardening the hardenable material in the reservoir to form the dental article and cement it to the subject's tooth structure; and removing the dental article form from the dental article; wherein the dental article form is reshaped while in the subject's mouth before or after filling the reservoir with the hardenable dental material.

New claims 59-64 provide further definition of the dental article form (claim 59), and further definition of the organic composition (claims 60-64).

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No new matter has been added. Entry and consideration of the new claims are respectfully requested.

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Summary

It is respectfully submitted that all the pending claims are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted

By

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CERTIFICATE UNDER 37 CFR §1.8:

The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 16th day of January, 2007, at 2:31 p.m. (Central Time).

By: R. GebhardtName: R. Gebhardt